This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Previously Presented)   A method for protecting high layer service in a multi-layer communication equipment, comprising the following process:

First, low layer processing module provides high layer processing module with low layer transmission passage;

Second, high layer processing module extract and insert high layer service of the multi-layer communication equipment from low layer transmission passage, avoiding changing the service between upstream node and downstream node after passing high layer processing module of the multi-layer communication equipment;

Third, after high layer processing module detecting said high layer processing module encountering a trouble, it will inform low layer processing module;

Fourth, a bypass will be set up after low layer processing module detecting high layer processing module encountering the trouble, so as to isolate the high layer processing module encountering a trouble.

2.   (Previously Presented)   A method for protecting high layer service in a multi-layer communication equipment according to claim 1, wherein in the second step, a transparent virtual path connection is set up for the service passing the high layer processing module of the said node, namely for ATM traffic, a cross connection, which changes neither virtual path identification nor virtual channel identification, will be set

up, to avoid changing the service between upstream node and downstream node after passing high layer processing module of the said node.

3.   (Previously Presented)   A method for protecting high layer service in a multi-layer communication equipment according to claim 1, wherein in the third step, when high layer processing module detects the said module encountering trouble, it will inform low layer processing module by soft messages or hardware signals.

4.   (Previously Presented)   A method for protecting high layer service in a multi-layer communication equipment according to claim 1, wherein in the fourth step, said situation that low layer processing module detect high layer processing module encountering trouble further comprising: low layer processing module judges whether the service signal transmitting by high layer processing module is invalid or not, or low layer processing module detects the hardware signals or soft messages sending by high layer processing module indicating its invalidation.

5.   (Previously Presented)   A method for protecting high layer service in a multi-layer communication equipment according to claim 1 or 4, wherein said bypass connection is actual connection of the physical lines, or it is logical connection within low layer processing module.